UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,559	06/29/2001	Jong Sang Baek	8733.448.00	5057

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MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER
BELL, PAUL A

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/893,559	BAEK ET AL.
	Examiner	**Art Unit**	
	PAUL A BELL	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *29 June 2001* .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-35* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-35* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .   6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regard to claims 1 and 7 the act of "generating an **intermediate** signal from the input signal" or "detecting whether the intermediate signal has **contiguous alternating states**" or "counting a number of contiguous **non--alternating states** ", are not directly supported in the specification. Therefore if you disagree please provide an illustration by matching the specific words in the spec and drawings that read on these claim words so as to make more clear just one of the many possible interpretations of these words. It is ok to use words broader than the scope of spec in the claims at the time of filing but examiner needs to know which words in the spec represent one of many possible illustrative examples of these words.

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-11 and 18-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 1 and 7 it is not clear what is meant by "intermediate signal",

"contiguous alternating states" and "contiguous non-alternating states"

With regard to claims 18 and 24 it is not clear what is meant by "intermediate signal".

With regard to claims 30 and 33 it is not clear what is meant by, "in response to a **pulse**

number of the input signal detected within a period range between the maximum value and the

minimum value during an **application interval** of the detection reference signal. "

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the
basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

> (e) the invention was described in-

> (1) an application for patent, published under section 122(b), by another filed in the United States before the
> invention by the applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the
> international application designating the United States was published under Article 21(2)(a) of such treaty in the
> English language; or

> (2) a patent granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this
> subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6.   Claims 12-18 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by KIM
(GB 2355840 A 2 May 2001).

With regard to claim 12 Kim teaches a method of driving a display (abstract) comprising:

receiving an input signal having a first period corresponding to a number of lines in the display

(figure 2, item 10); determining whether the first period is less than a first reference period

(figure 3, item S2 it is inherent when you determine if the frequency is in a range it must

necessarily involve determining whether the input period is less than a first reference period

and/or greater than a second reference period); and outputting a signal of a first state if the first

period is less than the first reference period (figure 3, item s4).

With regard to claim 13 Kim teaches the method according to claim 13, wherein the

receiving, determining and outputting steps are repeated and determining if the first state is

output a second time (figure 3).

With regard to claim 14 Kim teaches a method of driving a display (abstract) comprising:

receiving an input signal having a first period corresponding to a number of lines in the display

(figure 2, item 10); determining whether the first period is greater than a first reference period

(figure 3, item S2 it is inherent when you determine if the frequency is in a range it must

necessarily involve determining whether the input period is less than a first reference period

and/or greater than a second reference period); and outputting a signal of a first state if the first

period is greater than the first reference period (figure 3, item s4).

With regard to claim 15 Kim teaches the method according to claim 14, wherein the

receiving, determining and outputting steps are repeated and determining if the first state is

output a second time (figure 3).

With regard to claim 16 Kim teaches a method of driving a display (abstract) comprising:

receiving an input signal having a first period corresponding to a number of lines in the display

(figure 2, item 10);determining whether the first period is less than a first reference period and

greater than a second reference period (figure 3, item S2 it is inherent when you determine if the

frequency is in a range it must necessarily involve determining whether the input period is less

than a first reference period and/or greater than a second reference period); and outputting a

signal of a first state if the first period is less than the first reference period and greater than the

second reference period (figure 3, item s4).

With regard to claim 17 Kim teaches a method according to claim 16, wherein the

receiving, determining and outputting steps are repeated and determining if the first state is

output a second time (figure 3).

With regard to claim 18 Kim teaches a method of driving in a display (figure 2):

receiving a vertical synchronization signal (figure 2, item 10); generating an intermediate signal

from the vertical synchronization signal (figure 2, item 10 and 20), the intermediate signal

indicating whether the vertical synchronization signal has an error; and outputting a desired

video signal to the display when the error is detected (figure 3, item S2).

With regard to claim 24 Kim teaches a method of driving in a display (figure 2):

receiving a date enable signal; generating an intermediate signal from the data enable signal

(figure 2, item 40), the intermediate signal indicating whether the data enable signal has an error;

and outputting a desired video signal to the display when the error is detected (figure 3, item S2).

7.   Note Applicant cannot rely upon the foreign priority papers to overcome this Kim
rejection above because a translation of said papers has not been made of record in accordance
with 37 CFR 1.55. See MPEP § 201.15. Just send an official certified translation in to overcome
this rejection.

8.   Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Akira (JP 9270936 A 14 October 1997).

With regard to claim 12 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (abstract "horizontal synchronization signal"); determining whether the first period is less than a first reference period (abstract); and outputting a signal of a first state if the first period is less than the first reference period (figure 1, items 5 and 7).

With regard to claim 13 Akira teaches the method according to claim 13, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract).

With regard to claim 14 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (abstract "horizontal synchronization signal"); determining whether the first period is greater than a first reference period (abstract); and outputting a signal of a first state if the first period is greater than the first reference period (figure 1, items 5 and 7).

With regard to claim 15 Akira teaches the method according to claim 14, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract).

With regard to claim 16 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in

the display (abstract "horizontal synchronization signal");determining whether the first period is

less than a first reference period and greater than a second reference period (abstract); and

outputting a signal of a first state if the first period is less than the first reference period and

greater than the second reference period (figure 1, items 5 and 7).

With regard to claim 17 Akira teaches a method according to claim 16, wherein the

receiving, determining and outputting steps are repeated and determining if the first state is

output a second time (abstract).

9.   Claims 30 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by
Yamaguchi (6,329,975).

With regard to claim 30 Yamaguchi teaches a liquid crystal display device including; a

timing controller (figure 3) provided with a signal presence determiner for detecting an

application of an input signal from an interface (figure 3, item 11), wherein said signal presence

determiner comprising: an oscillator for generating a reference clock having the same frequency

as a horizontal synchronizing signal and a pre-synchronizing signal having the same frequency as

a vertical synchronizing signal (figure 3, item 6); a period detector for comparing a data enable

signal from the exterior thereof with the reference clock to output a period of the input signal

with the aid of a detection reference signal and the pre-synchronizing signal (figure 3, item 11); a

period comparator for comparing a period range between a desired maximum value and a desired

minimum value of the input signal; and signal presence/absence comparing means for

determining a presence/absence of the input signal in response to a pulse number of the input

signal detected within a period range between the maximum value and the minimum value

during an application interval of the detection reference signal (figure 3, items 8 and 9).

With regard to claim 33 Yamaguchi teaches a method of driving a liquid crystal display

device including; a timing controller (figure 3)provided with a signal presence determiner for

detecting an application of an input signal from an interface (figure 3, item 11), said method

comprising the steps of: generating a reference clock having the same frequency as a horizontal

synchronizing signal (figure 3, Dot Clock) and a pre-synchronizing signal having the same

frequency as a vertical synchronizing signal (figure 3, item Vsp1); comparing a data enable

signal from the exterior with the reference clock to output a period of the input signal with the

aid of a detection reference signal and the pre-synchronizing signal (figure 3, items 11 and 9);

comparing a period range between a desired maximum value and a desired minimum value of the

input signal (figure 3, item 8); and determining a presence/absence of the input signal in

response to a pulse number of the input signal detected within a period range between the

maximum value and the minimum value during an application interval of the detection reference

signal (figure 3, items 8 and 9).

Allowable Subject Matter

10.   Claims 19-23, 25-29, 31, 32, 34, and 35 would be allowable if rewritten to overcome the
rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include
all of the limitations of the base claim and any intervening claims.

Art Unit: 2675

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to: Commissioner of Patents and Trademarks
                                                    Washington, D.C. 20231
or faxed to: (703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Paul Bell
Paul Bell
Art unit 2675
28 June 2003

STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600